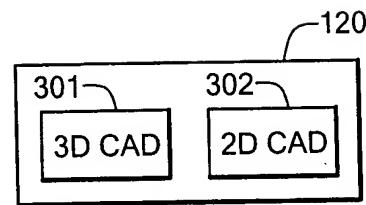
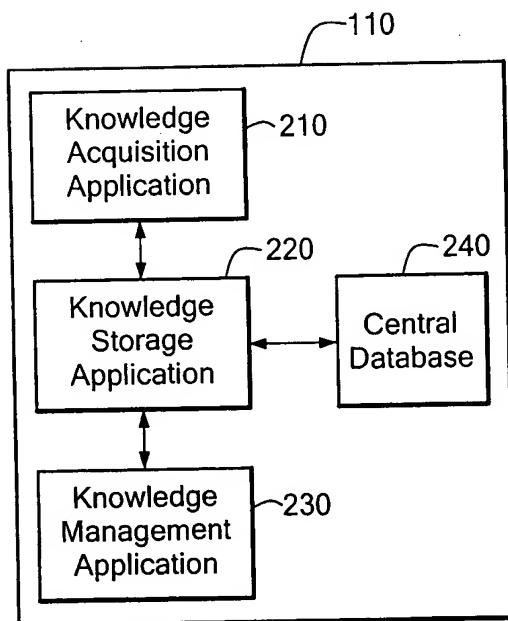


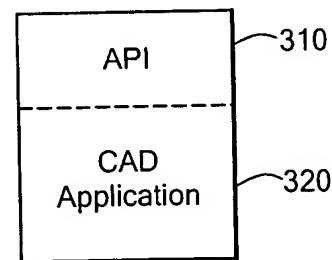
**FIG. 1**



**FIG. 3A**



**FIG. 2**



**FIG. 3B**

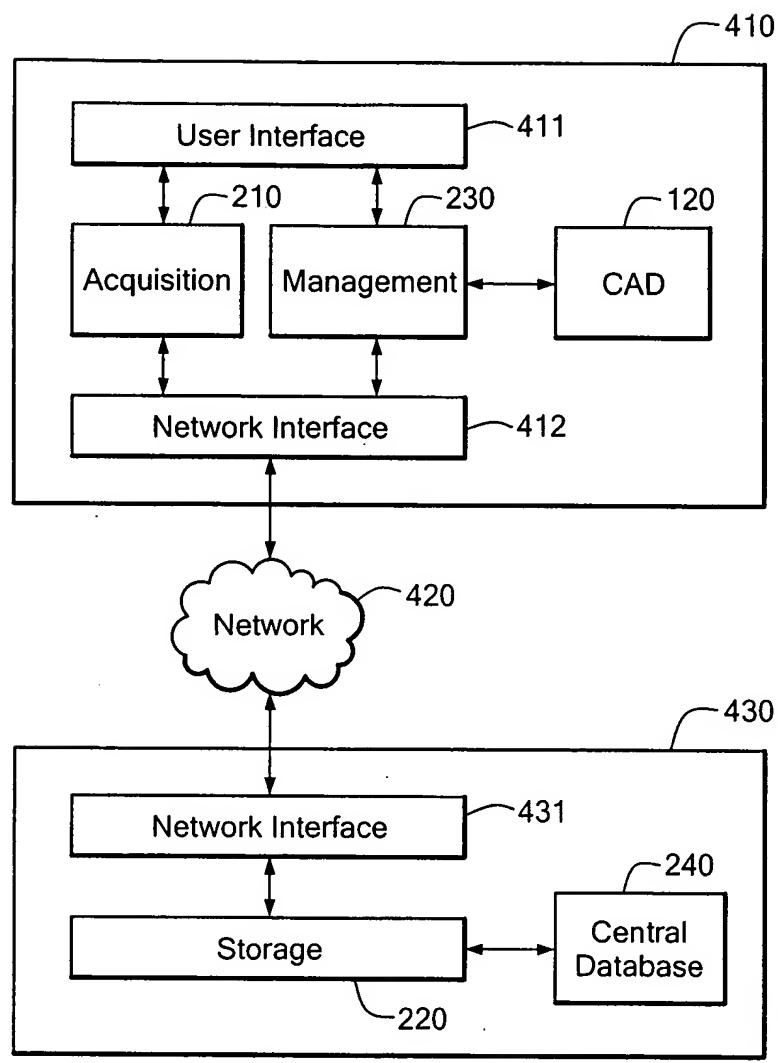


FIG. 4

**FIG. 5**

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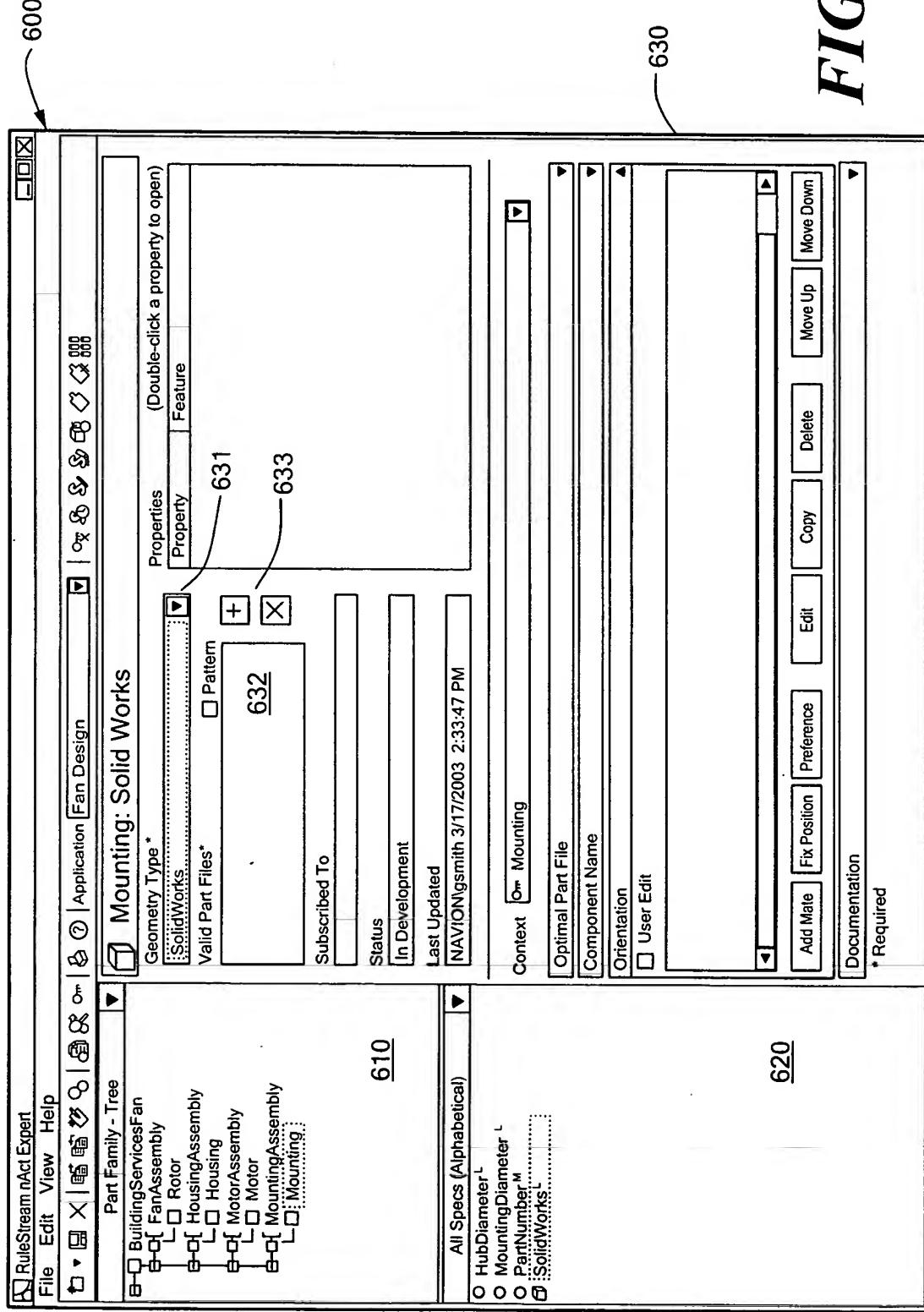
80902

80903

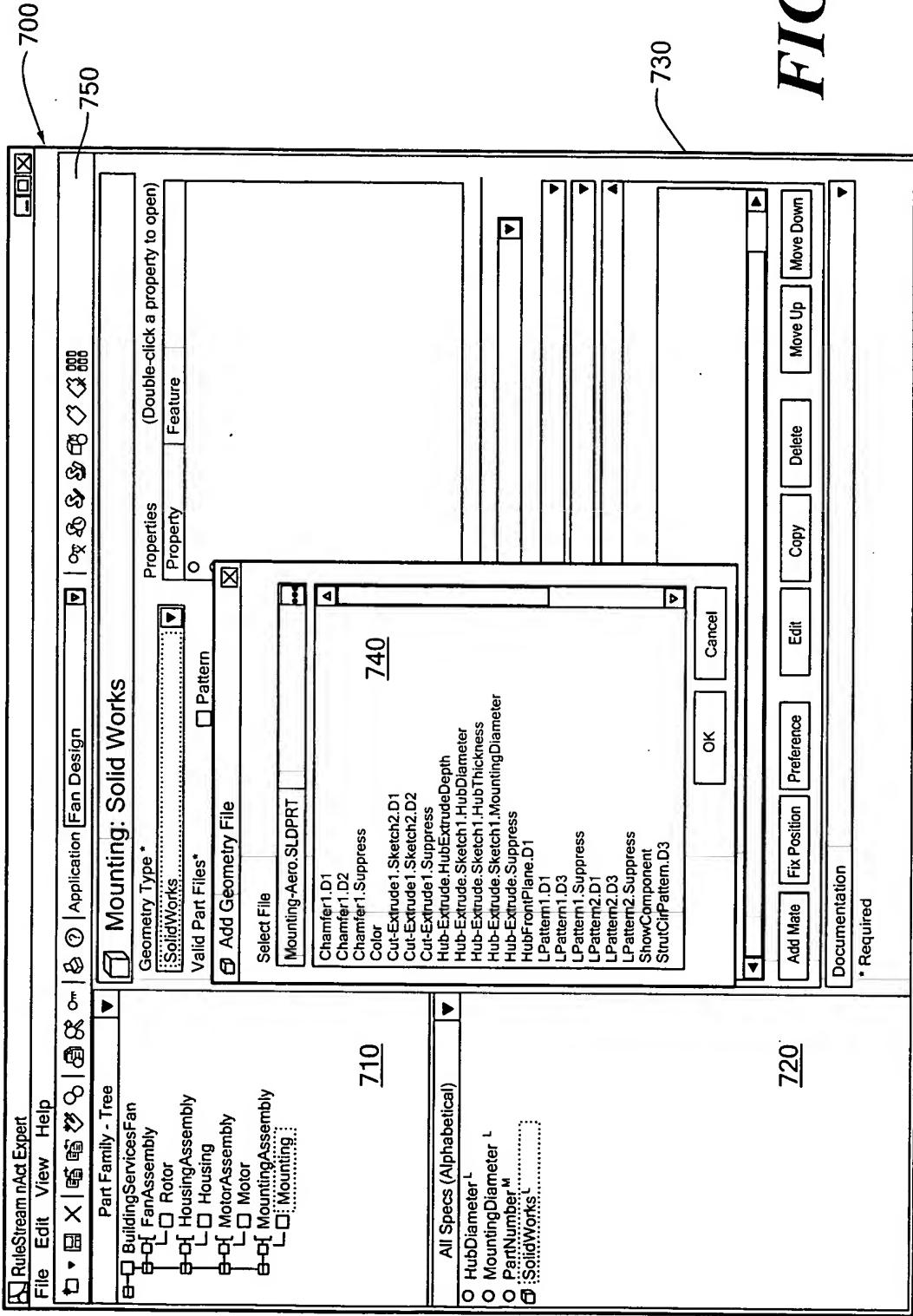
80904

80905

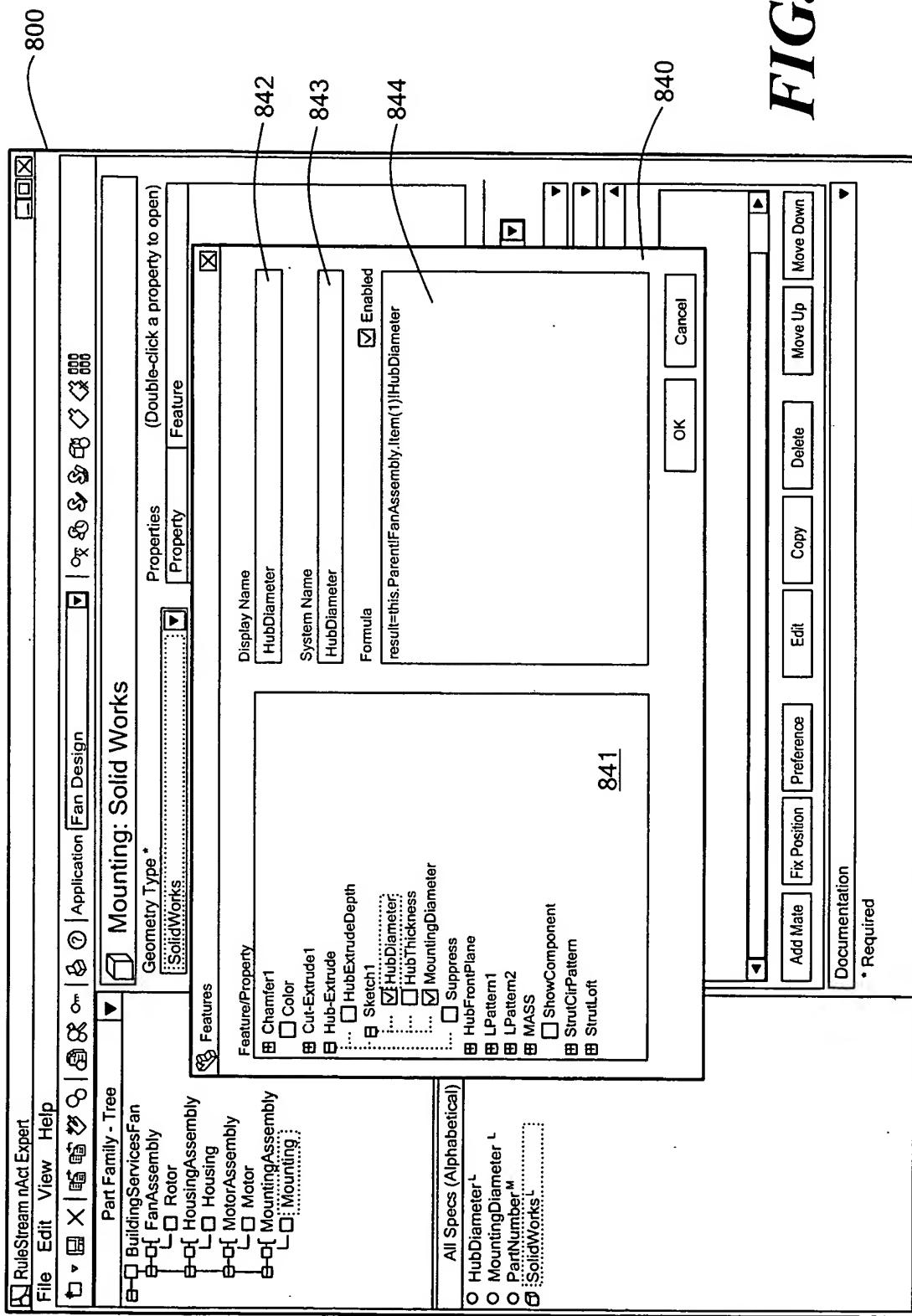
<p



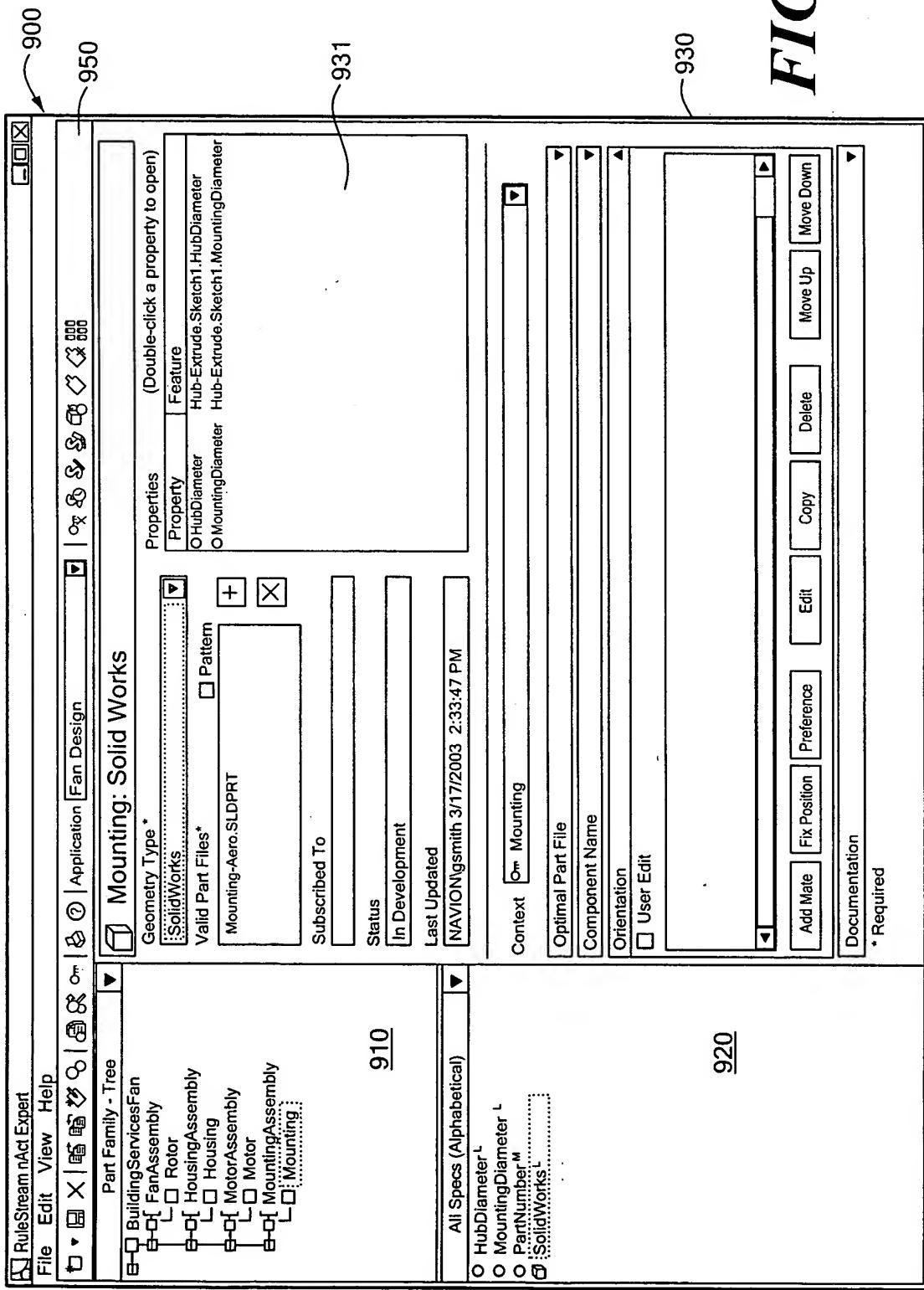
**FIG. 6**

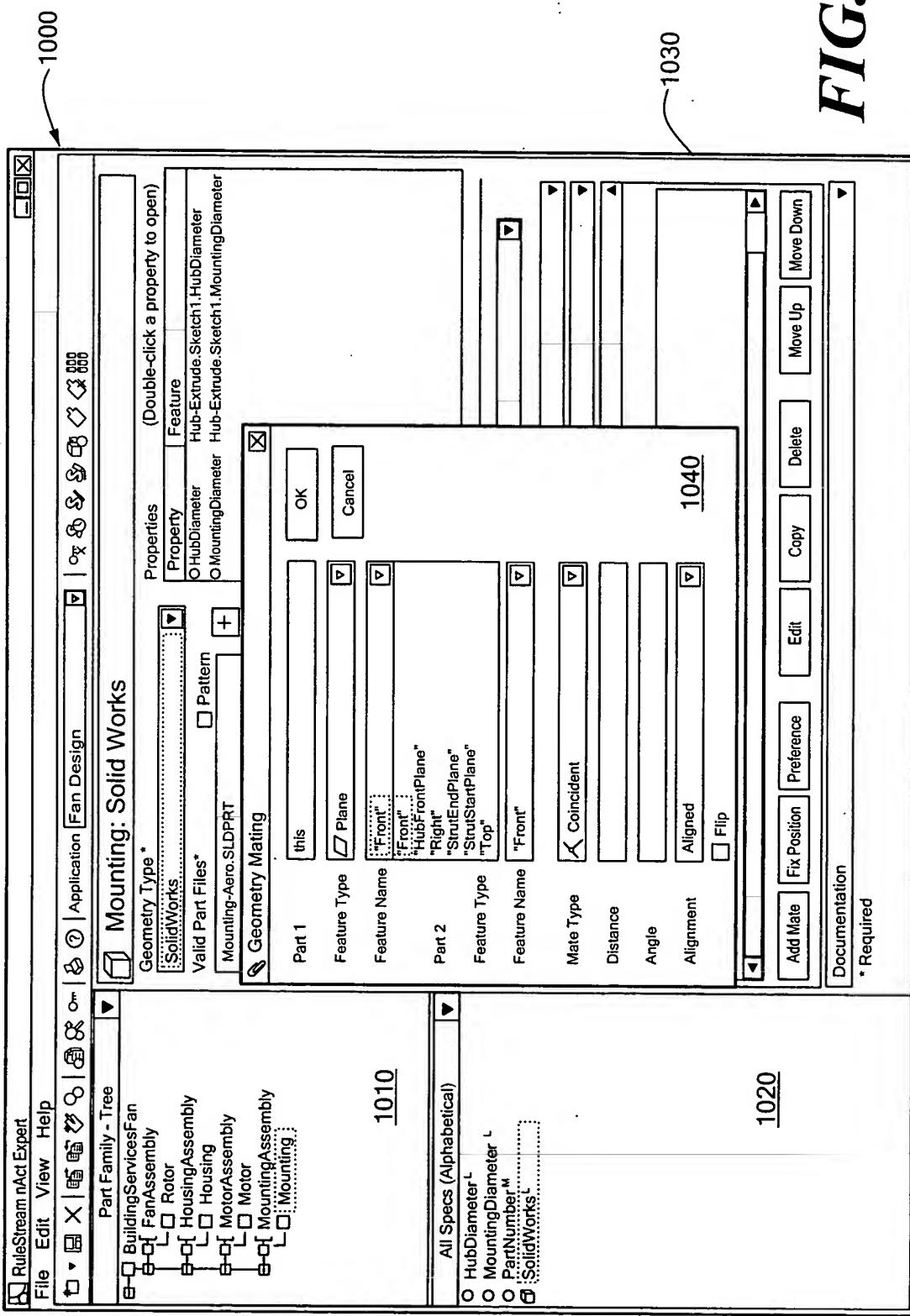


**FIG. 7**



**FIG. 8**





**FIG. 10**

1100

The screenshot shows the SolidWorks interface with the following details:

- Part Family - Tree:** BuildingServicesFan  
  ↳ FanAssembly  
    ↳ Rotor  
  ↳ HousingAssembly  
    ↳ Housing  
    ↳ MotorAssembly  
      ↳ Motor  
      ↳ MountingAssembly  
        ↳ Mounting
- Mounting Solid Works Dialog:**
  - Geometry Type \***: SolidWorks
  - Valid Part Files \***: Mounting-Aero.SLDprt
  - Subscribed To**: [Empty list]
  - Status**: In Development
  - Last Updated**: NAVIONGsmith 3/17/2003 2:33:47 PM
  - Context**: Mounting
  - All Specs (Alphabetical)**:
    - HubDiameter L
    - MountingDiameter L
    - PartNumber M
    - SolidWorks L
  - Orientation**:
    - User Edit
  - AddMate**: AddMate this, "PLANE", "Front", this.parent.HousingAssembly(1), "PLANE", "Front", swMateCOINCIDENT, swMateAlignED, FALSE, AddMate this, "PLANE", "Right", this.parent.HousingAssembly(1), "PLANE", "Right", swMateCOINCIDENT, swMateAlignED, FALSE, AddMate this, "PLANE", "Top", this.parent.HousingAssembly(1), "PLANE", "Top", swMateCOINCIDENT, swMateAlignED, FALSE, 0.
  - Buttons**: Add Mate, Fix Position, Preference, Edit, Copy, Delete, Move Up, Move Down, Documentation, \* Required

FIG. II

三

1131

RuleStream nAct Expert	
File	Edit
<input type="checkbox"/> X	<input type="checkbox"/> <input type="checkbox"/>
<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>
<input type="checkbox"/> Application	<input type="checkbox"/> Fan Design
<b>Part Family - Tree</b>	
<input type="checkbox"/> BuildingServicesFan <ul style="list-style-type: none"> <li><input type="checkbox"/> FanAssembly           <ul style="list-style-type: none"> <li><input type="checkbox"/> Rotor</li> <li><input type="checkbox"/> HousingAssembly</li> <li><input type="checkbox"/> MotorAssembly</li> <li><input type="checkbox"/> Motor</li> <li><input type="checkbox"/> MountingAssembly</li> <li><input type="checkbox"/> Mounting</li> </ul> </li> </ul>	
<input type="checkbox"/> BuildingServicesFan: FanArea <ul style="list-style-type: none"> <li><input type="checkbox"/> Display Name *</li> <li><input type="checkbox"/> Fan Area</li> <li><input type="checkbox"/> System Name *</li> <li><input type="checkbox"/> FanArea</li> <li><input type="checkbox"/> Property Type *</li> <li><input type="checkbox"/> Formula Driven</li> <li><input type="checkbox"/> Data Type*</li> <li><input type="checkbox"/> Double</li> <li><input type="checkbox"/> Units</li> <li><input type="checkbox"/> m<sup>2</sup>(metres<sup>2</sup>)</li> <li><input type="checkbox"/> Category*</li> <li><input type="checkbox"/> Requirements</li> </ul>	
<b>1210</b>	
<input type="checkbox"/> BuildingServicesFan <ul style="list-style-type: none"> <li><input type="checkbox"/> Context</li> <li><input type="checkbox"/> BuildingServicesFan</li> <li><input type="checkbox"/> Formula           <ul style="list-style-type: none"> <li><input type="checkbox"/> Auto Revert</li> <li><input type="checkbox"/> Follow Part Number</li> </ul> </li> </ul>	
<b>1220</b>	
If this!FanDiameter > 0 Then result = 3.141 * (this!FanDiameter / 2) <sup>2</sup> Else result = 0 Else	
<input type="checkbox"/> User Interface	
<input type="checkbox"/> Valid Values	
<input type="checkbox"/> When Changed	
<input type="checkbox"/> Database Constraint	
<input type="checkbox"/> Documentation	
<input type="checkbox"/> * Required	
<b>1230</b>	
<input type="checkbox"/> 1200	
<b>1240</b>	

**FIG. 12**

**1300**

The screenshot shows the RuleStream nAct Expert application window. At the top, there's a menu bar with File, Edit, View, Help, and several icons. Below the menu is a toolbar with icons for opening files, saving, and other operations. The main area has tabs for 'BuildingServicesFan' and 'FanArea'. The 'BuildingServicesFan' tab is active, displaying a diagram of a fan assembly with a motor and housing. To the right of the diagram are several property fields:

- Display Name: Building Services Fan
- System Name: BuildingServicesFan
- Application: \* (radio button)
- Fan Design: (radio button)
- Category: (radio button)

Below these is a 'Description' section with the following text:

This part family contains the fundamental product knowledge for designing axial flow, building ventilation fans. As the name implies, the direction of flow through an axial fan is parallel to the axis of rotation.

Further down, there are sections for 'Image Filename' (BuildingServiceFan.bmp), 'Documentation' (Corporate Fan Design Best Practices.doc), 'Subscribed To' (Double-click to view subscriptions), 'Knowledge Source' (Fan Design, Howden Buffalo), 'Status' (In Development), and 'Where Used'.

**1310**

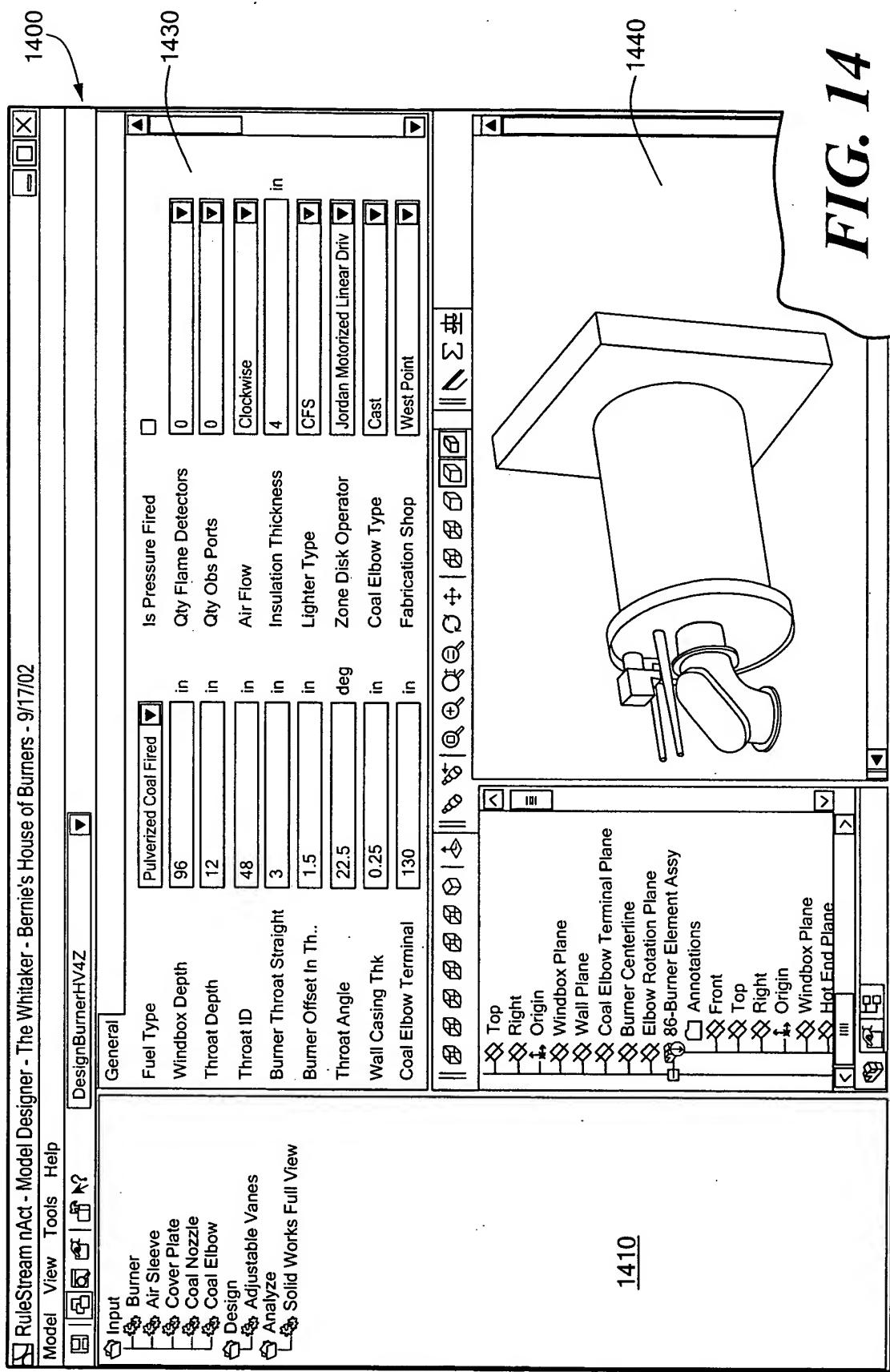
**1320**

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**1340**

\* Required

**FIG. 13**



**FIG. 14**

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DesignBurnerHV4Z (Design)

DesignBurnerHV4Z	1520	
Burner	1530	
Air Sleeve	Throat Depth New	0
Cover Plate	Wall Casing Thk	0.25
Coal Nozzle	Wall Tube CO	3
Lighter	Throat Straight	1.8125
Coal Elbow	Burner Offset in Th...	1.8125
Design	Coal Elbow Type	Cast
Burner Optim	Zone Disk Operator	Jordan Motorized Lin...
Adjustable Va	City Flame Detect..	1
Adjustable Va	Qty Obs Ports	1

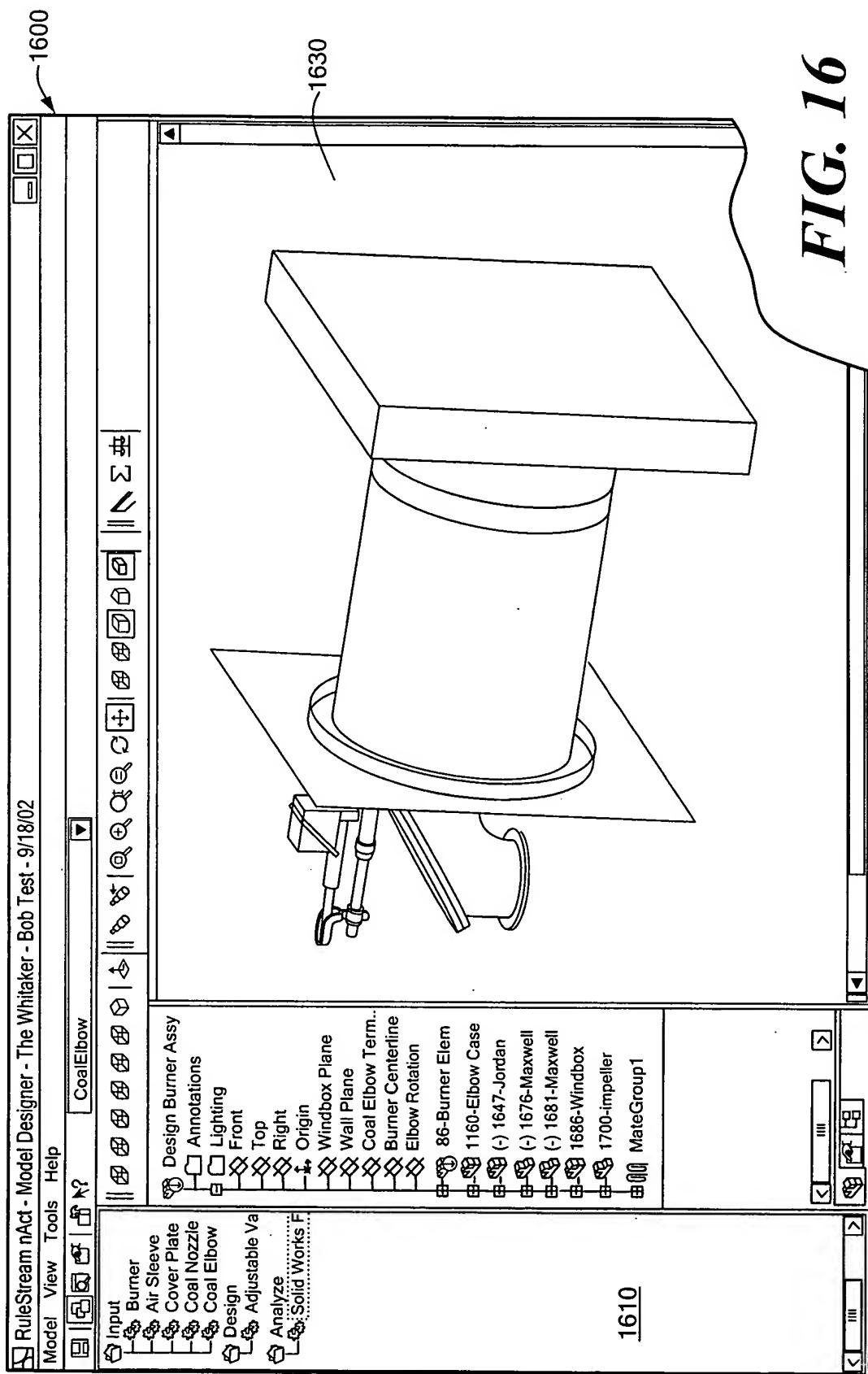
Property	Value	1540
Air Flow	Clockwise	
Burner Offset	1.8125	
Coal Elbow Typ	Cast	
Current Date	1/2/2003	
Current Process	Design Eng	
Customer ID	0	
Customer Name	Burner buy	
Fuel Type	Pulverized	
Insulation Thick...	4	
Is Pressure Fin	False	
Lname	Design Burn	
Obs Parts Fuh	False	
Part Fam	False	

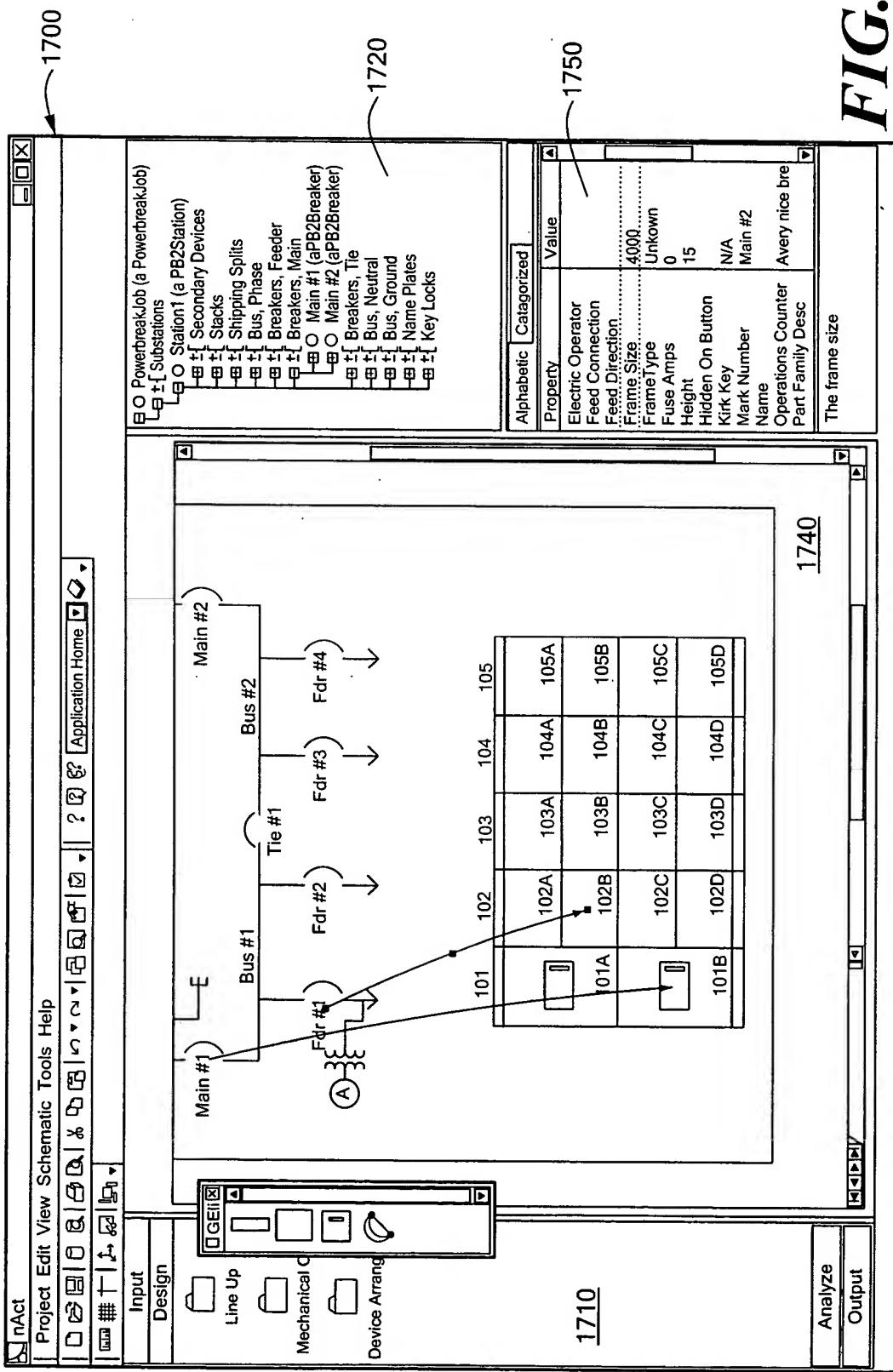
1550

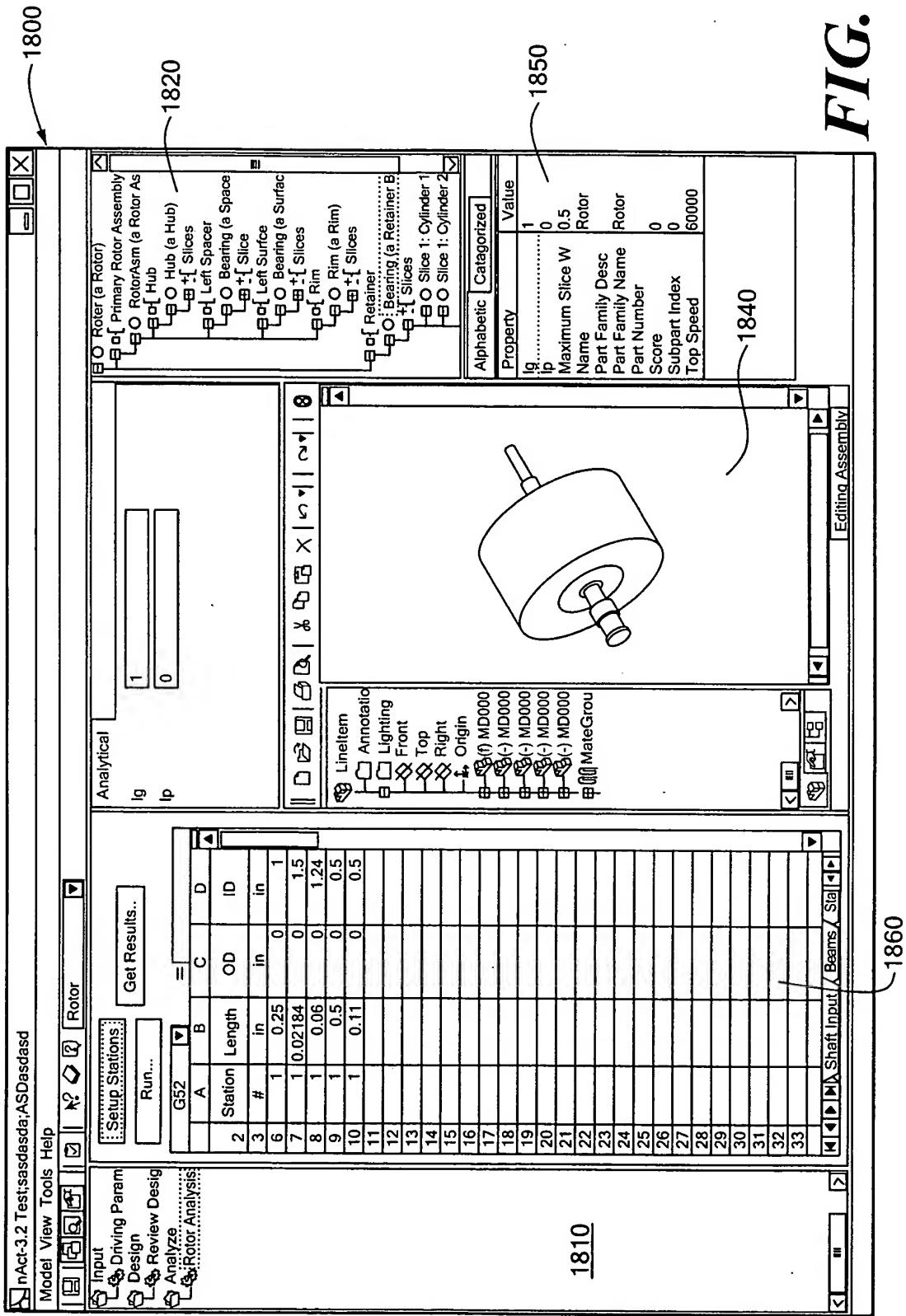
1510

1540

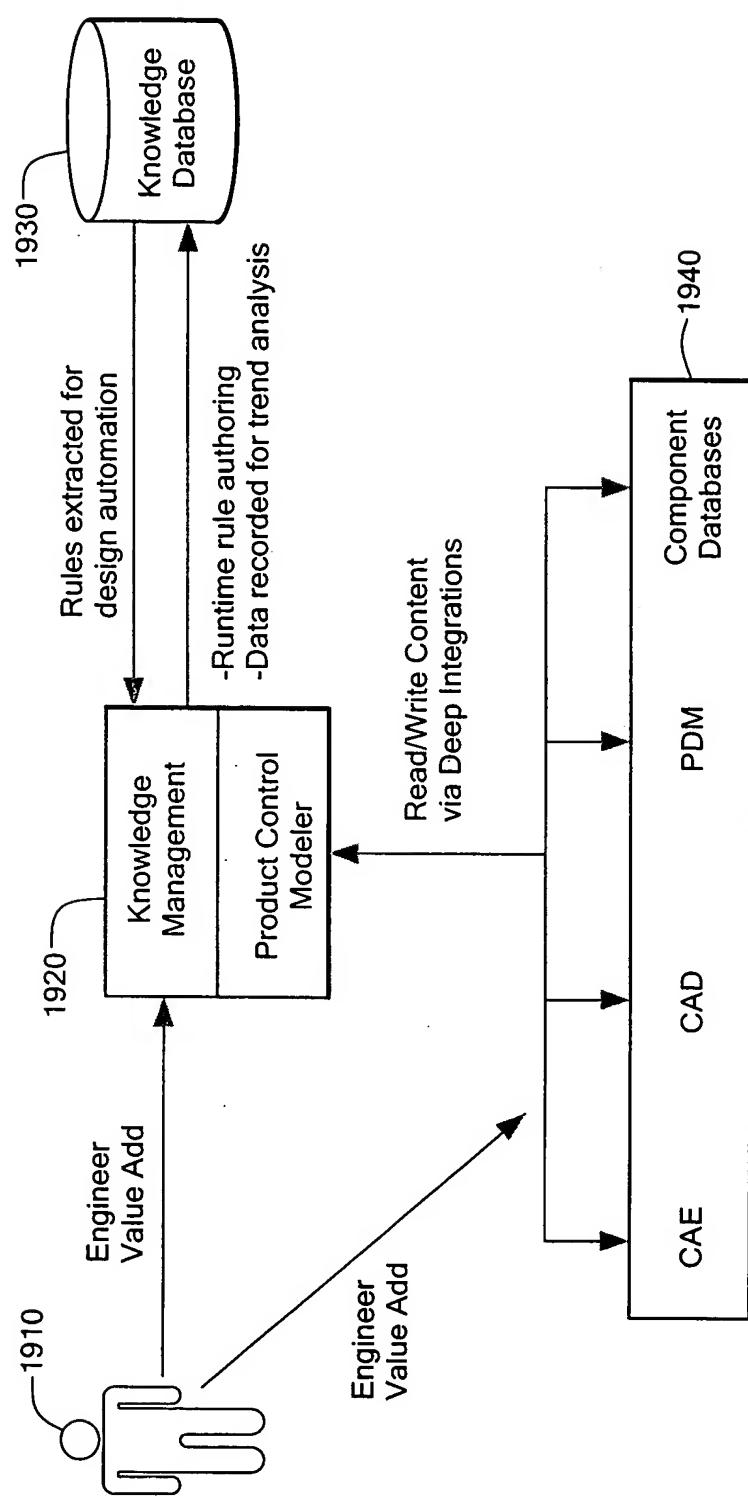
FIG. 15



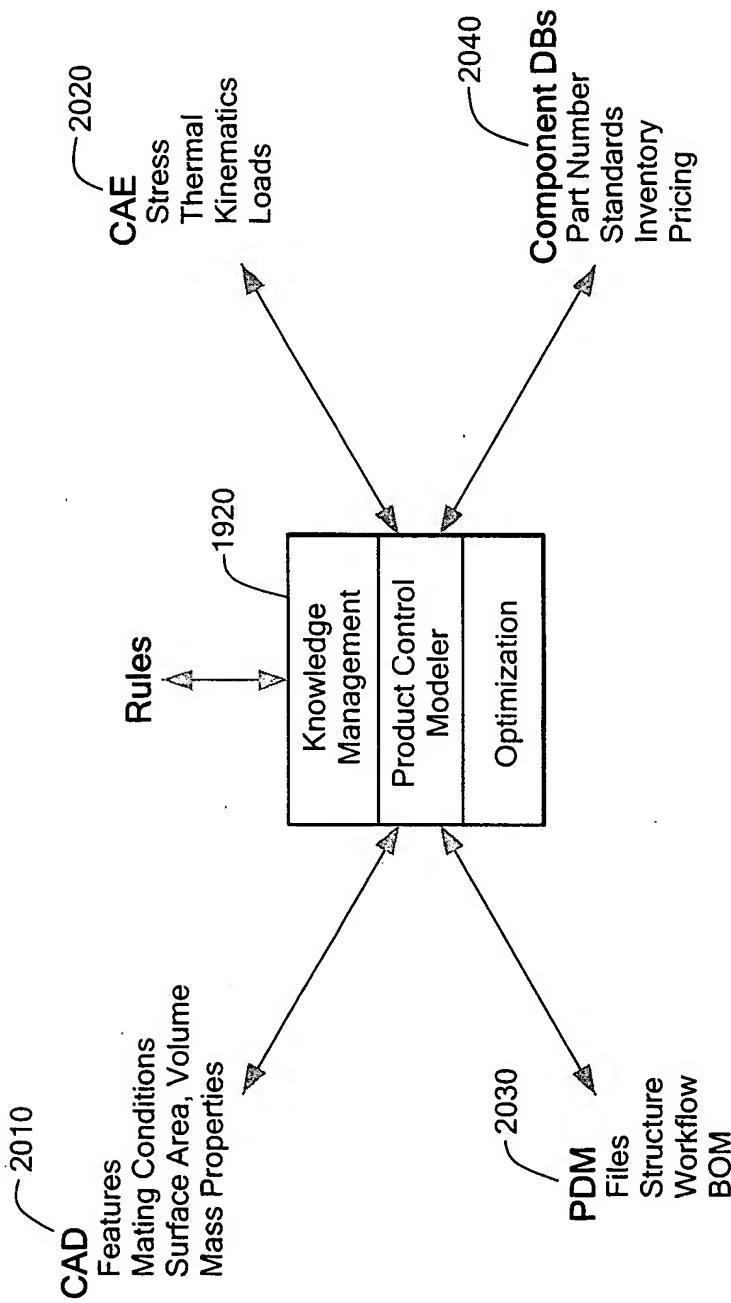




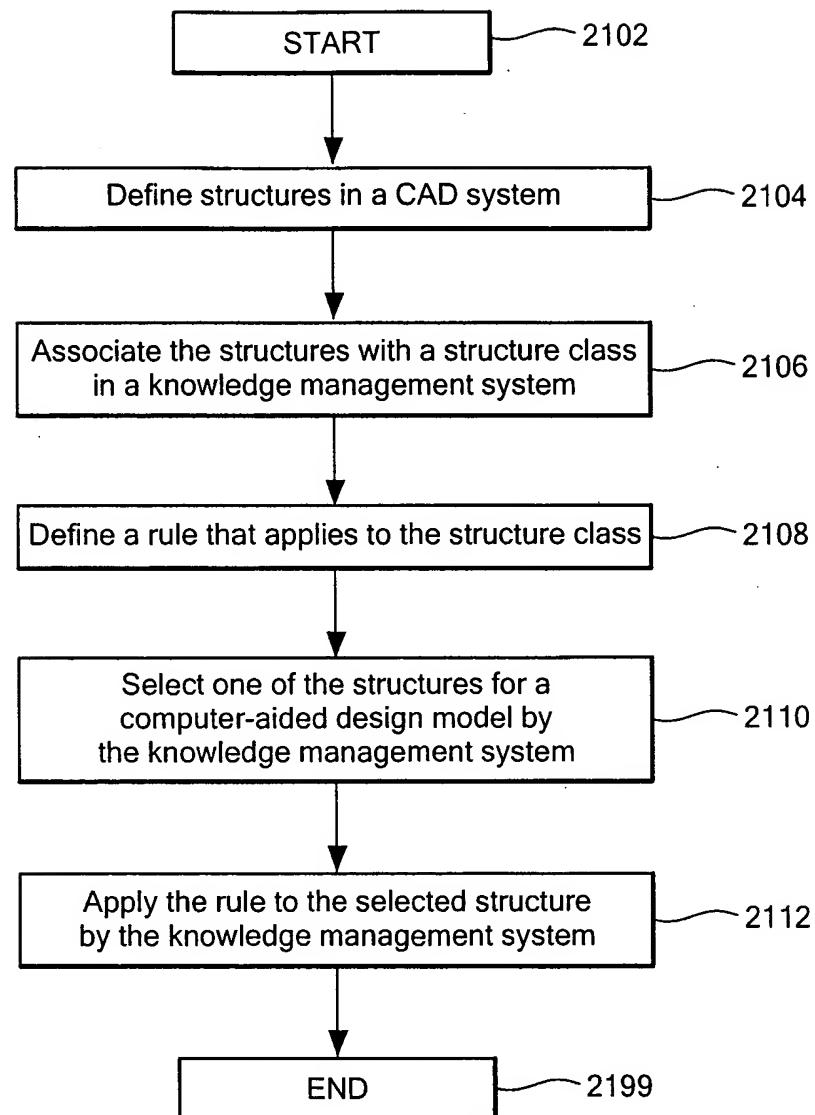
**FIG. 18**



**FIG. 19**

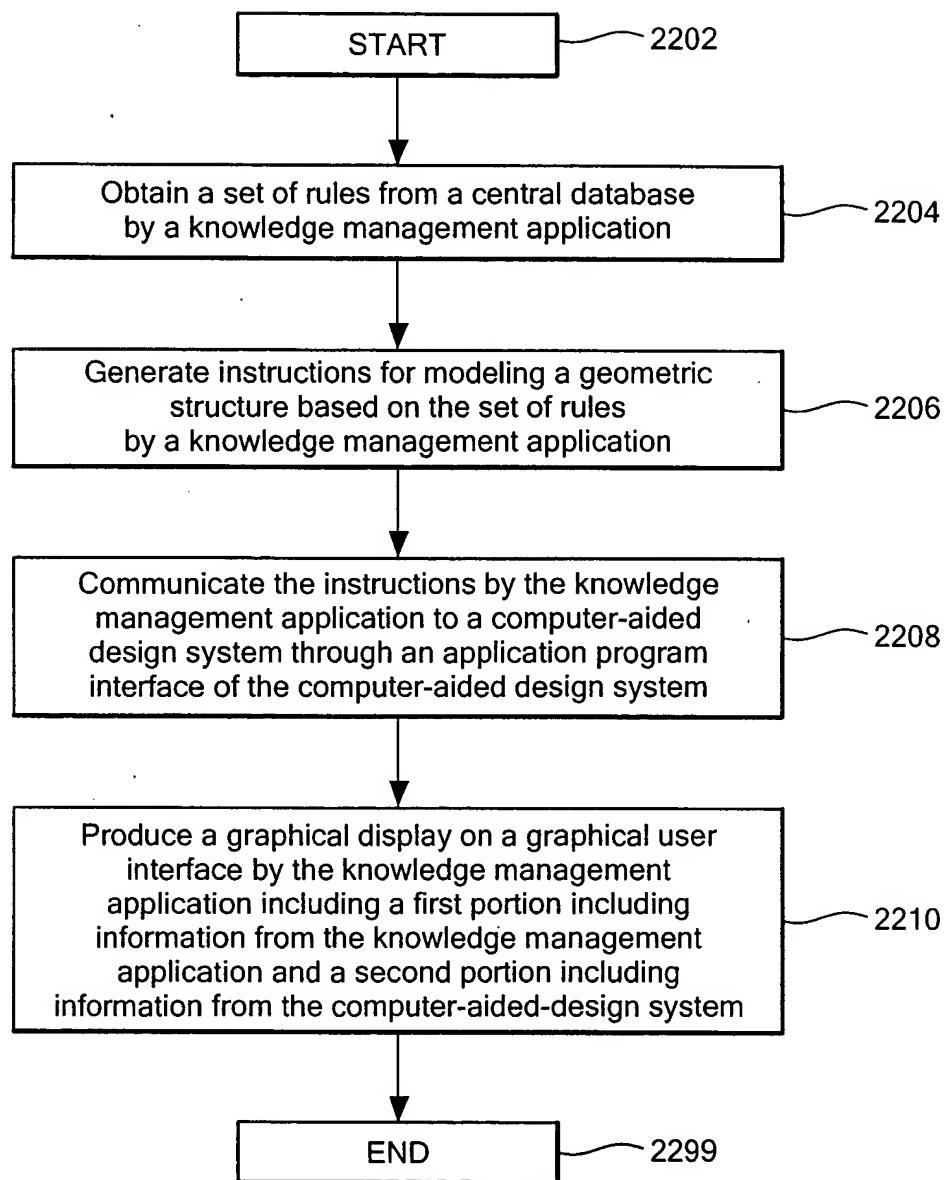


**FIG. 20**



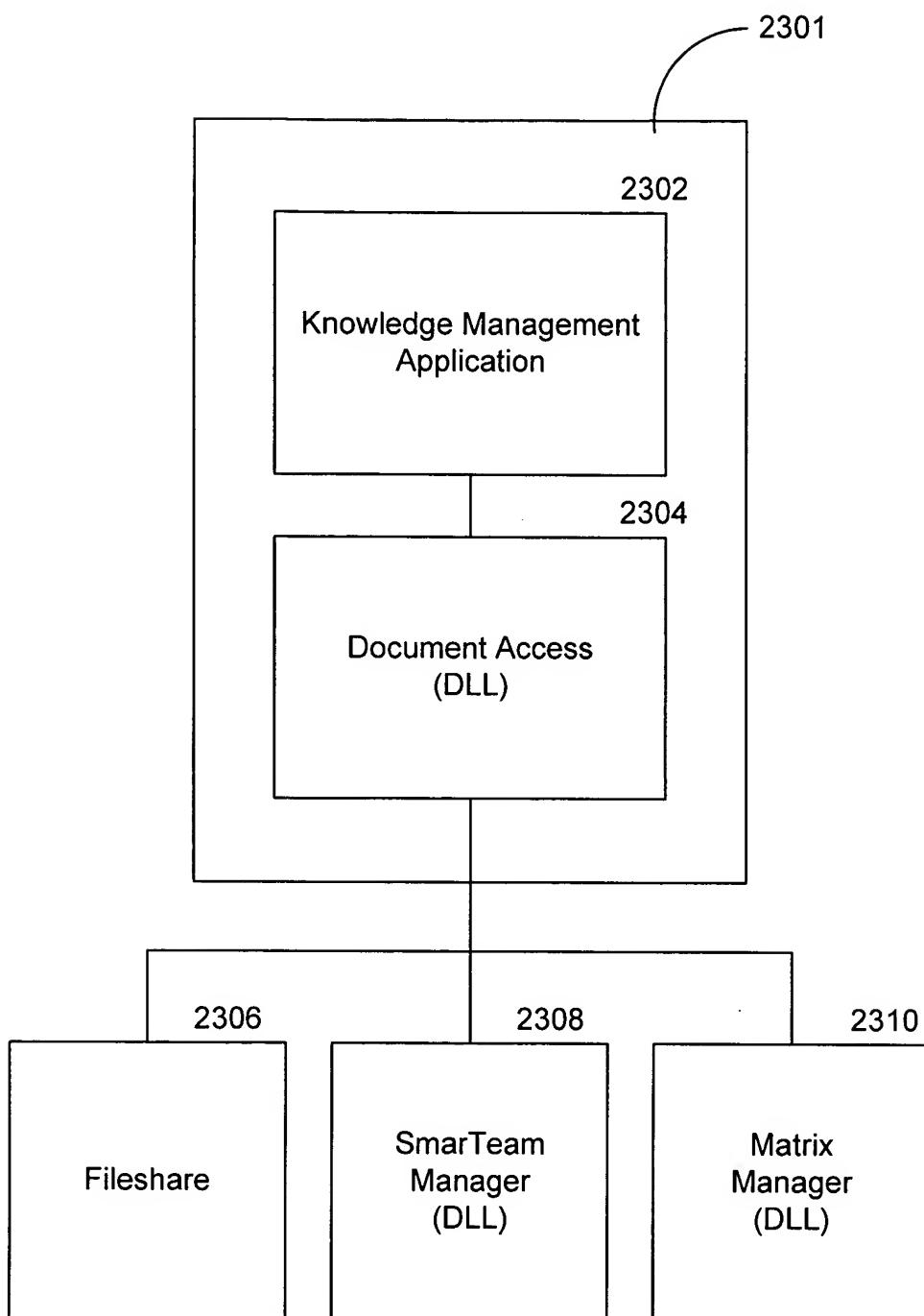
2100

**FIG. 21**

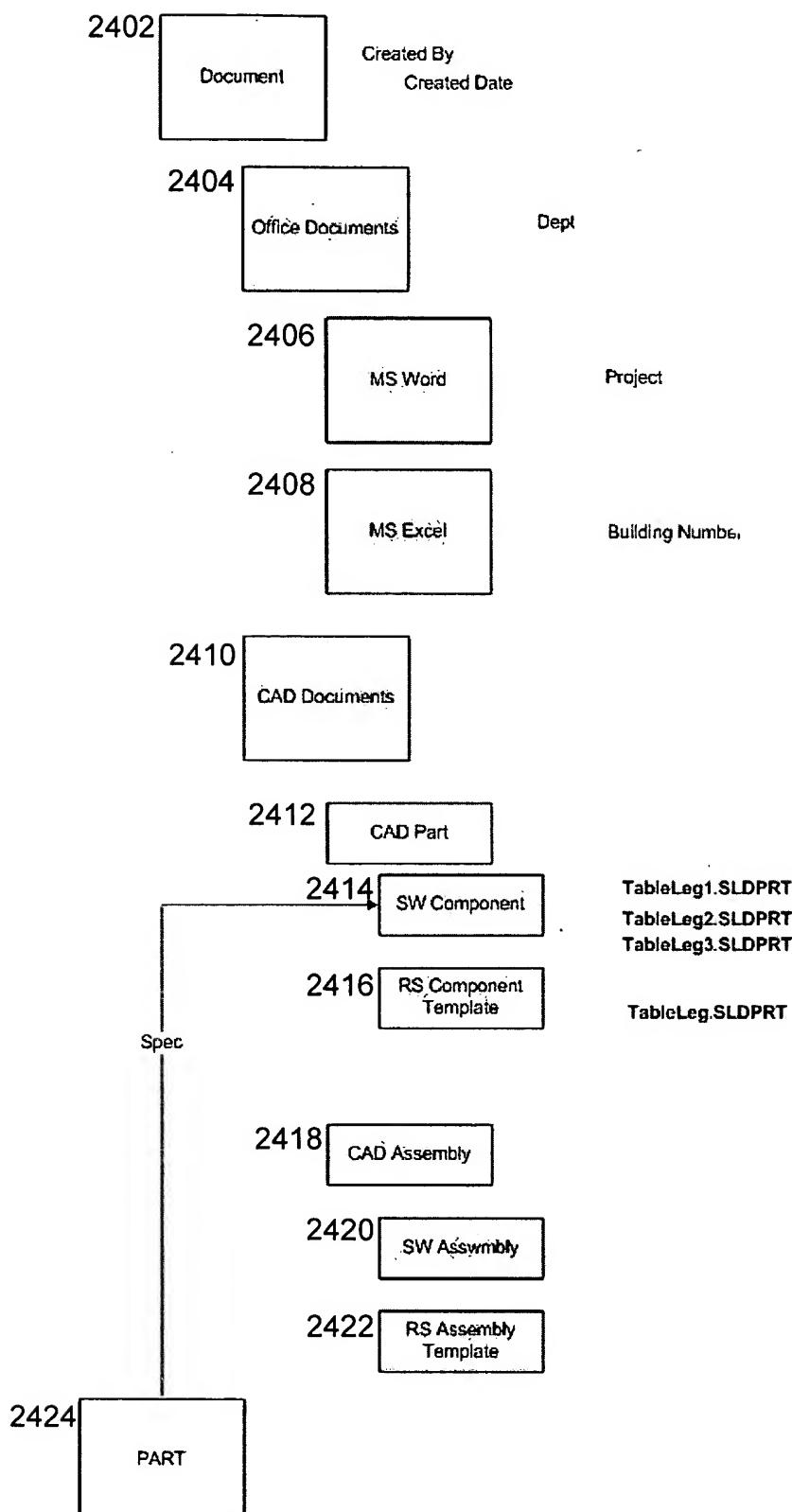


2200

**FIG. 22**



***FIG. 23***



***FIG. 24***

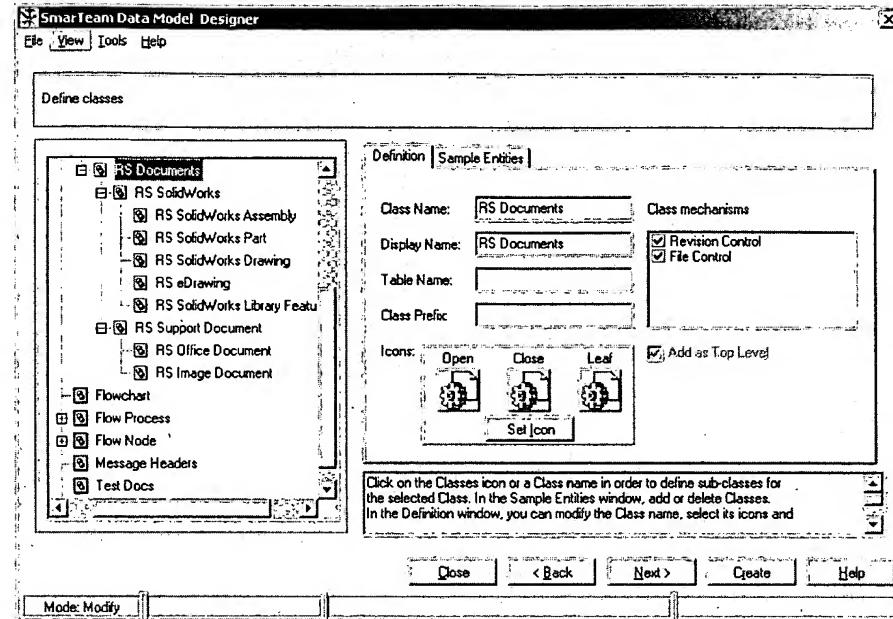
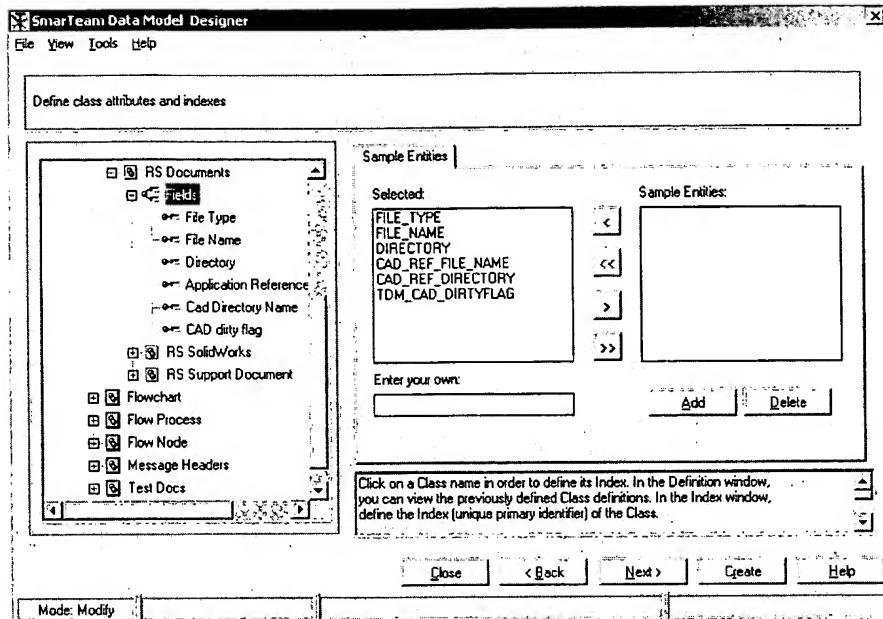
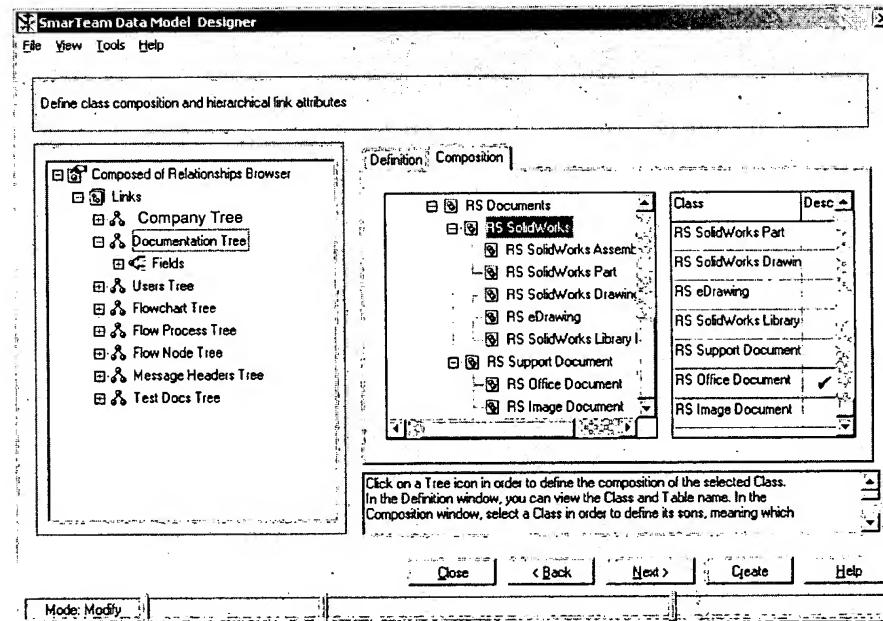


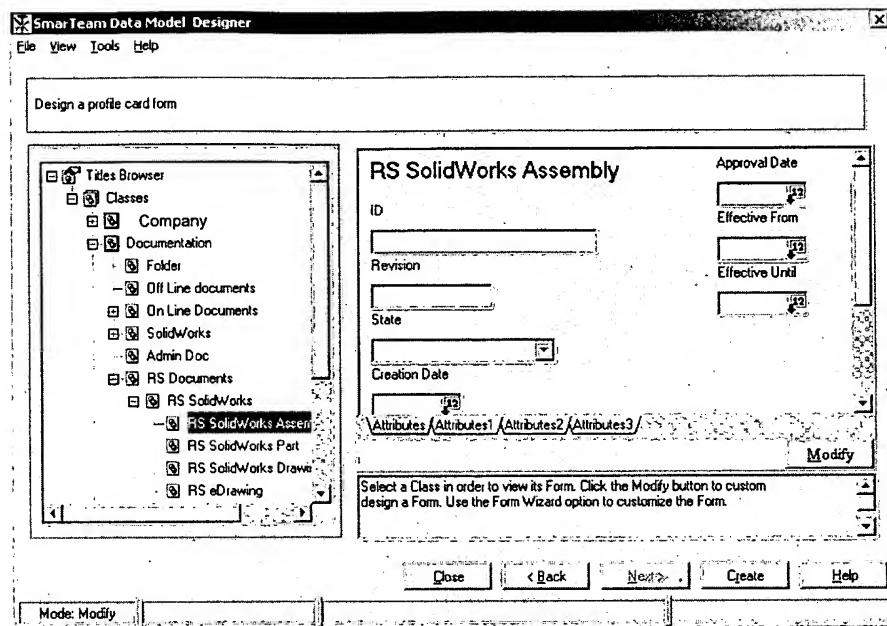
FIG. 25



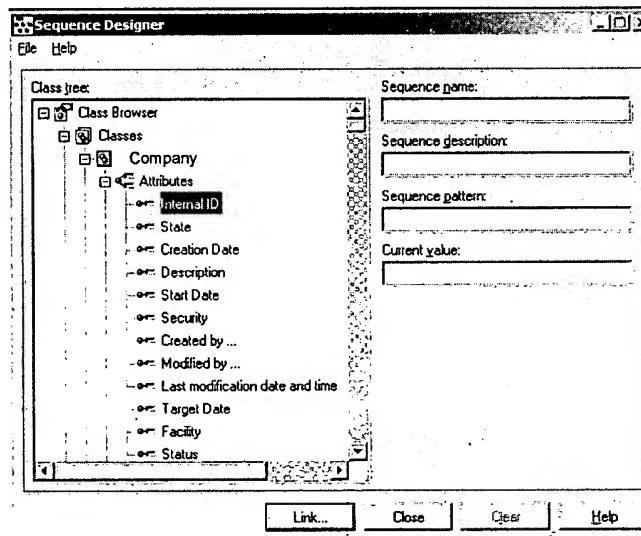
**FIG. 26**



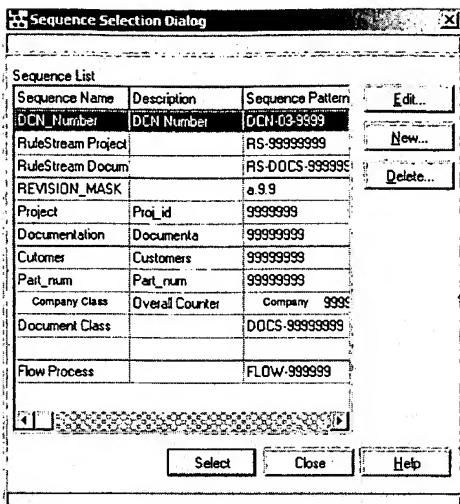
**FIG. 27**



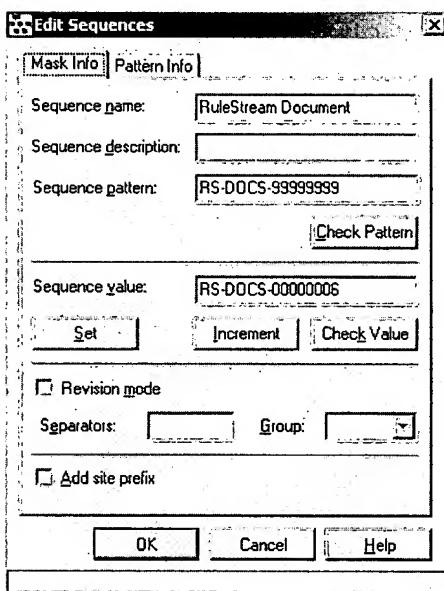
**FIG. 28**



**FIG. 29**



**FIG. 30**



**FIG. 31**

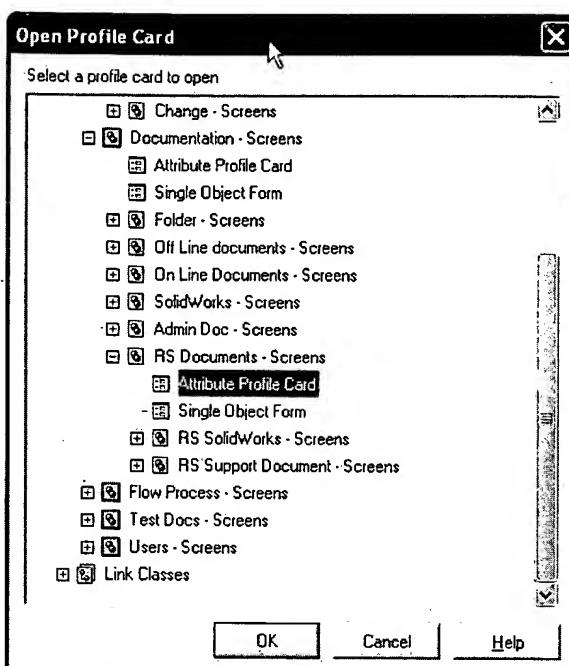


FIG. 32

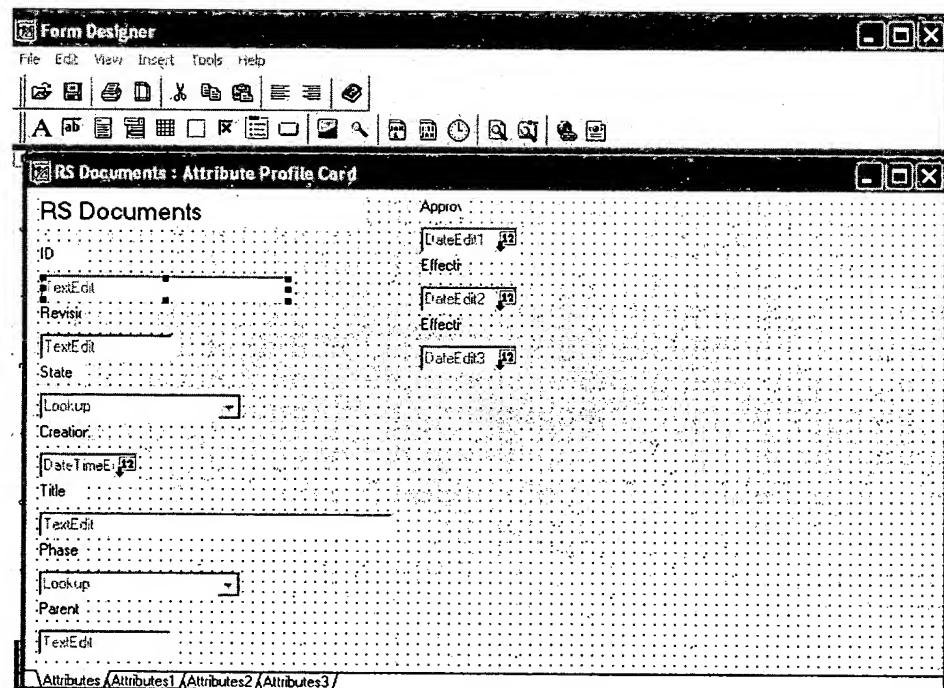
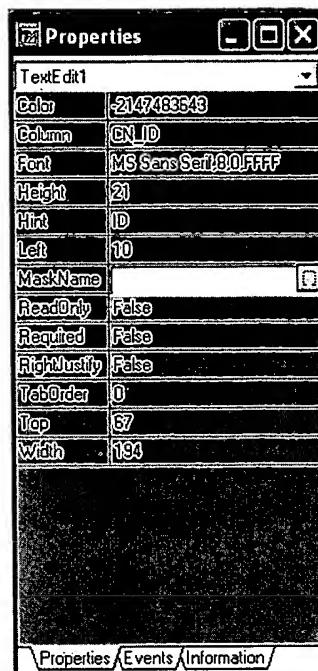


FIG. 33



**FIG. 34**

A screenshot of a "Sequence Selection Dialog" window. The window title is "Sequence Selection Dialog". It contains a table titled "Sequence List" with columns: Sequence Name, Description, Sequence Pattern, and three buttons: Edit..., New..., and Delete... .

Sequence Name	Description	Sequence Pattern	
DCN_Number	DCN Number	DCN-03-9999	<a href="#">Edit...</a>
RuleStream Project		RS-99999999	<a href="#">New...</a>
RuleStream Docum		RS-DOCS-999999	<a href="#">Delete...</a>
REVISION_MASK		a.9.9	
Project	Proj_id	9999999	
Documentation	Documenta	99999999	
Customer	Customers	99999999	
Part_num	Part_num	99999999	
Company Class	Overall Counter	Company -9999	
Document Class		DOCS-99999999	
Flow Process		FLOW-999999	

At the bottom of the dialog are buttons for "Select", "Close", and "Help".

**FIG. 35**

[Profile Card](#) | [Links](#) | [Notes](#) | [Revision](#) | [Viewer](#)

## SolidWorks Assembly

Part Number	1" TEMPLATE TEST ACTUATOR
Revision	.0
Title	1" TEST ACTUATOR ASSEMBLY
Description	ACTUATOR WITH NO INTERNALS
Facility	WILLOUGHBY #1 - 2101
Activity Center	New Product Development
State	New
Phase	Preliminary Design
Security	Medium
Assembly Type	Full View
Configuration	Default
<a href="#">End Connections</a> <input type="button" value="None"/> <input type="button" value="Add/Edit"/> <input type="button" value="None"/>	

[Attributes](#) | [Model Info](#) | [File Info](#) | [Revision Info](#) | [Gen Info](#)

**FIG. 36**

[Profile Card](#) | [Links](#) | [Notes](#) | [Revision](#) | [Viewer](#)

## SolidWorks Part

Part Number	ALLOY-1-31S4
Revision	C
Title	31 SERIES BODY
Description	
Facility	HIGHLAND - 2201
Activity Center	Drafting
State	Released
Phase	Production
Security	Medium
Part Type	Body
Configuration	ALLOY-1-31S4
<a href="#">End Connections</a> <input style="width: 100px; height: 20px;" type="button" value="1/4"/> <input type="button" value="Company (2)"/> <input type="button" value="Add/Edit"/> <input type="button" value="None"/>	

[Attributes](#) | [Model Info](#) | [File Info](#) | [Revision Info](#) | [Gen Info](#)

**FIG. 37**

Profile Card | Links | Notes | Revision | Viewer |

### SolidWorks Drawing

Part Number	3-31R
Revision	B
Title	31 SERIES STEM
Description	
Facility	HIGHLAND - 2201
Activity Center	Drafting
State	Released
Phase	Production
Security	Medium
Drawing Type	Manufacturing
End Connections	
None	
Add/Edit None	

Attributes Model Info File Info Revision Info Gen Info

FIG. 38

### Company Document

Title	
Description	
Revision	
Facility	
Activity Center	
Document Type	
State	
Security	

Attributes Attributes1 Attributes2

FIG. 39

Title: Knowledge Management System with  
Integrated Product Document Management for  
Computer-Aided Design Modeling  
Inventor(s): Carek et al.  
Application No.: 10/800,051  
Docket No.: 2834/103  
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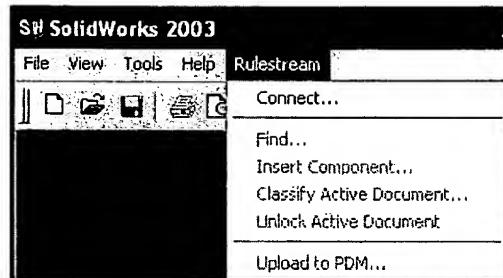


FIG. 40

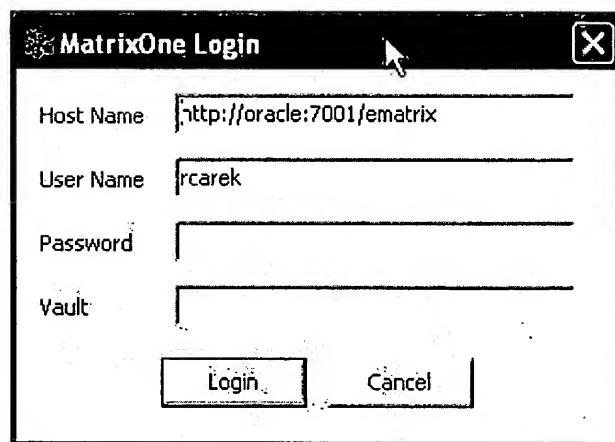


FIG. 41

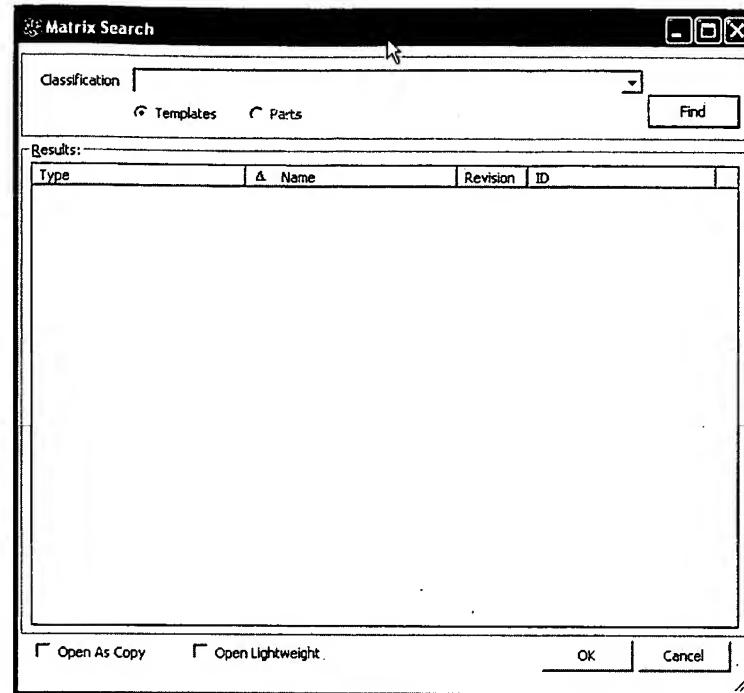


FIG. 42

Type	Name	Revision	ID
RS Component Template	bob1	A	21539.19576.38605.53628
RS Component Template	Cover Plate	A	21539.19576.35465.32871
RS Drawing Template	CR_XXX	A	21539.19576.46534.19611
RS Drawing Template	Draw1	A	21539.19576.22480.16300
RS Drawing Template	Draw2	A	21539.19576.33385.4845
RS Component Template	GuideT001	A	21539.19576.37889.15736
RS Component Template	New_Test	A	21539.19576.16418.43114
RS Component Template	New_Test2	A	21539.19576.22515.53187
RS Component Template	New_Test3	A	21539.19576.58745.60082
RS Component Template	New_Test4	A	21539.19576.30473.57697
RS Component Template	New_Test6	A	21539.19576.29839.33067
RS Component Template	New_Test8	A	21539.19576.52119.1963
RS Component Template	Nozzle Skid	A	21539.19576.13242.9055
RS Component Template	Part2	A	21539.19576.43109.24122
RS Component Template	RC_XXX	A	21539.19576.47488.19407
RS Component Template	Windbox Extension Sleeve	A	21539.19576.46073.13647
RS Component Template	Yoke Pin	A	21539.19576.30785.26866

FIG. 43

Title: Knowledge Management System with,  
Integrated Product Document Management for,  
Computer-Aided Design Modeling  
Inventor(s): Carek et al.  
Application No.: 10/800,051  
Docket No.: 2834/103  
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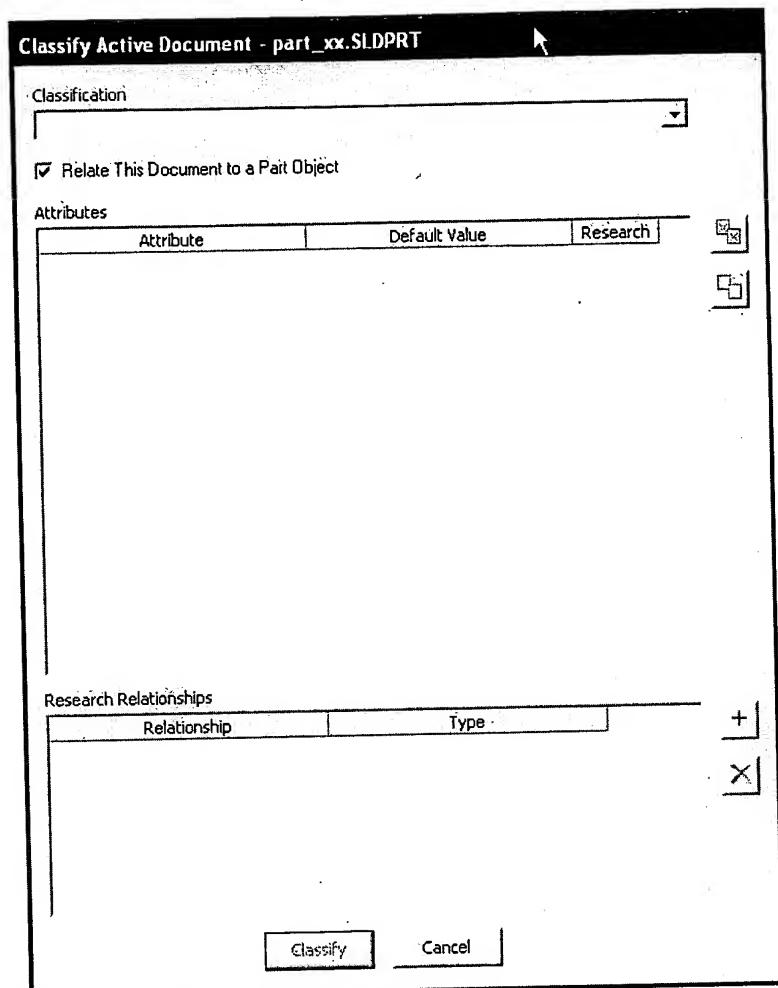


FIG. 44

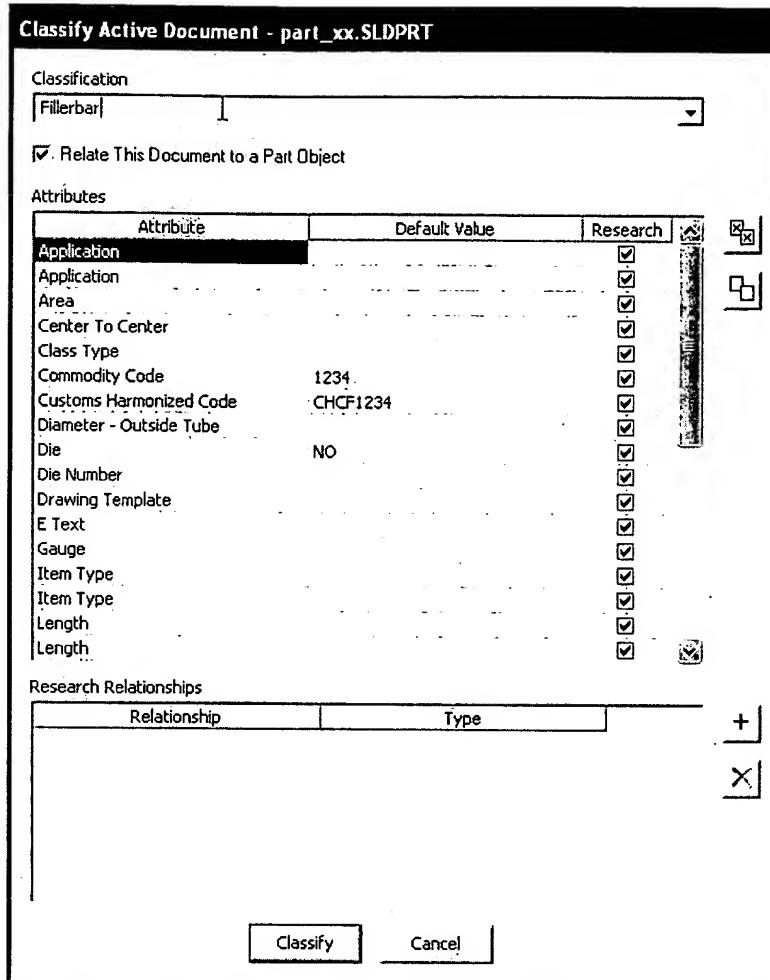


FIG. 45

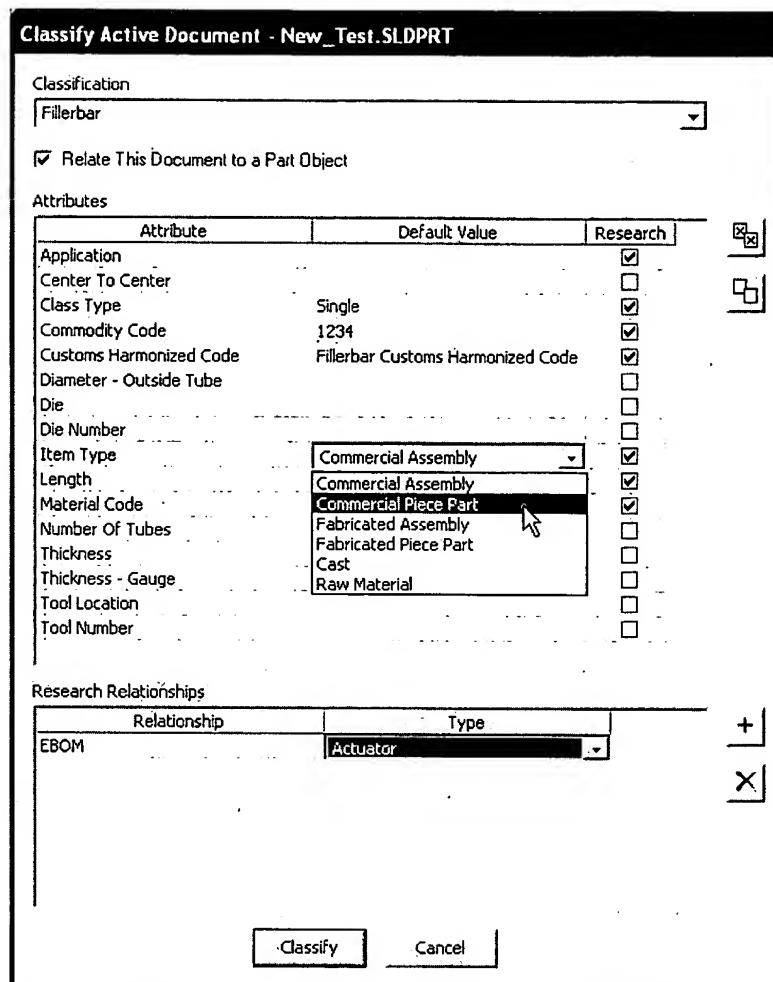


FIG. 46

Title: Knowledge Management System with  
Integrated Product Document Management for  
Computer-Aided Design Modeling  
Inventor(s): Carek et al.  
Application No.: 10/800,051  
Docket No.: 2834/103  
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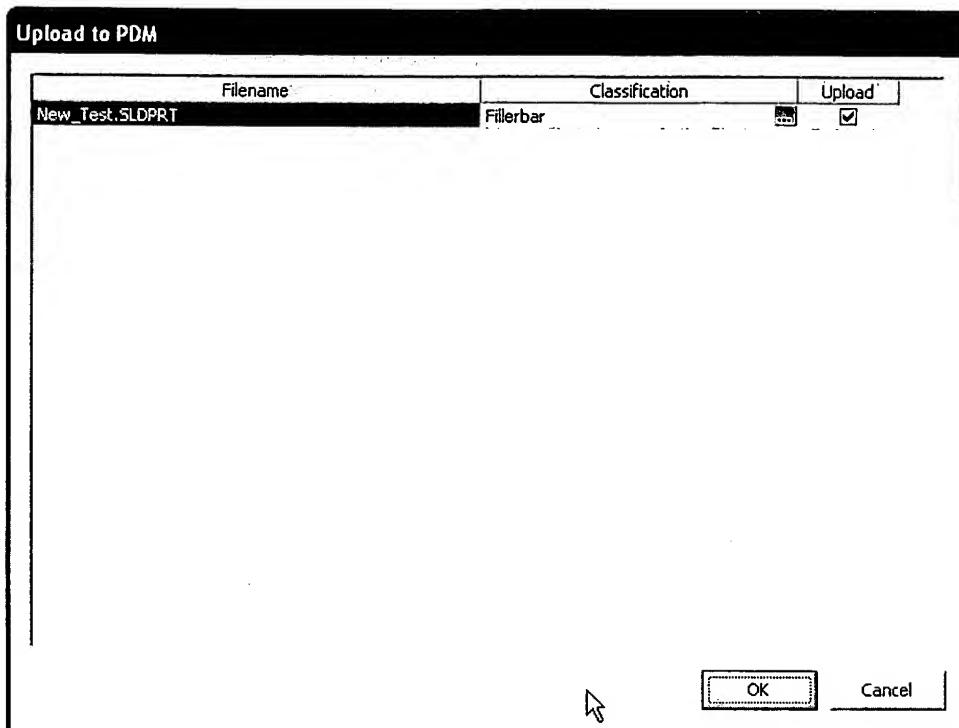


FIG. 47

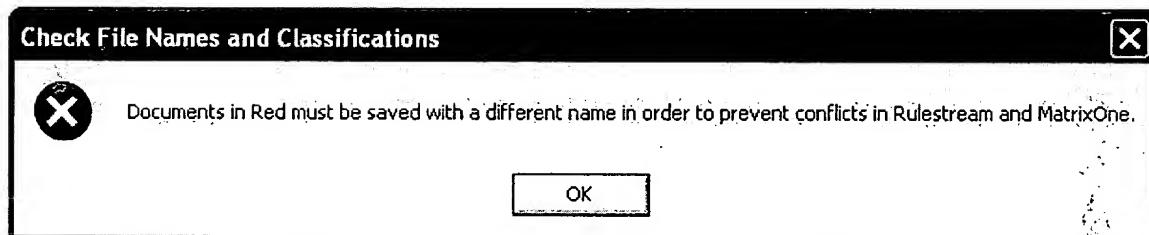


FIG. 48

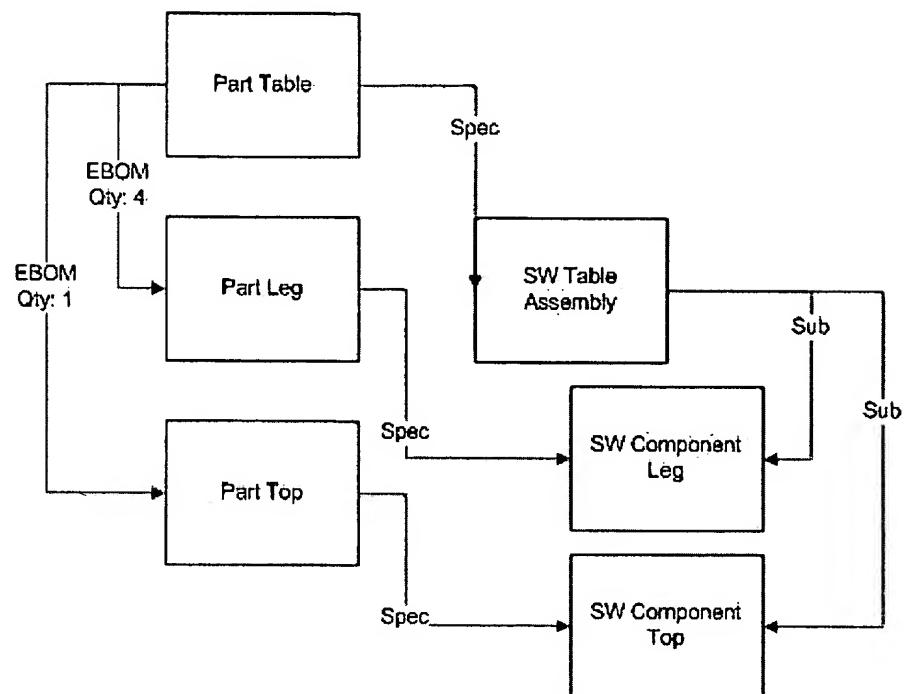


FIG. 49

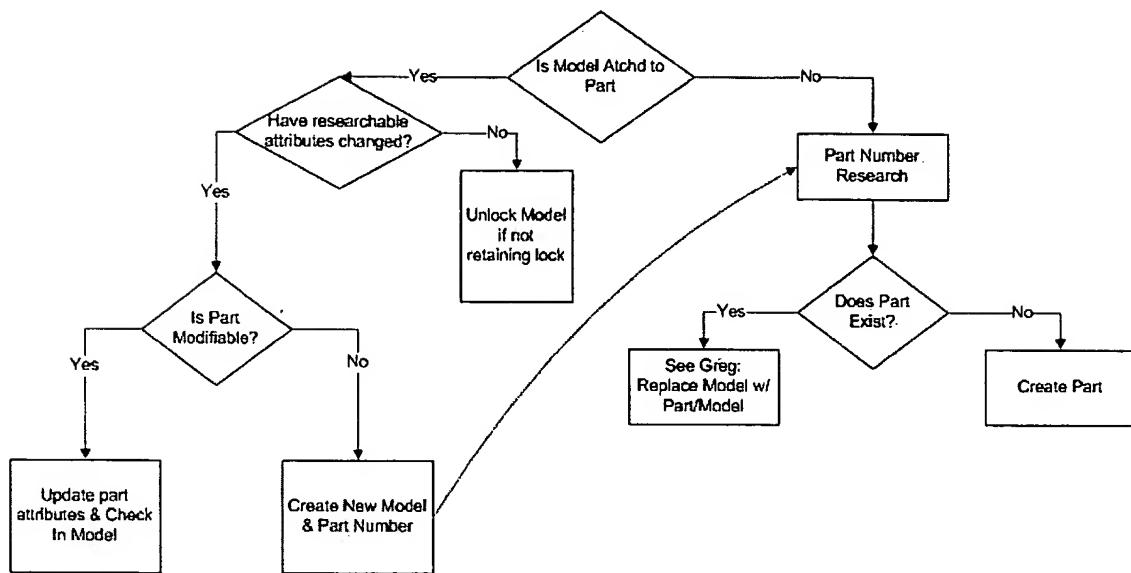


FIG. 50

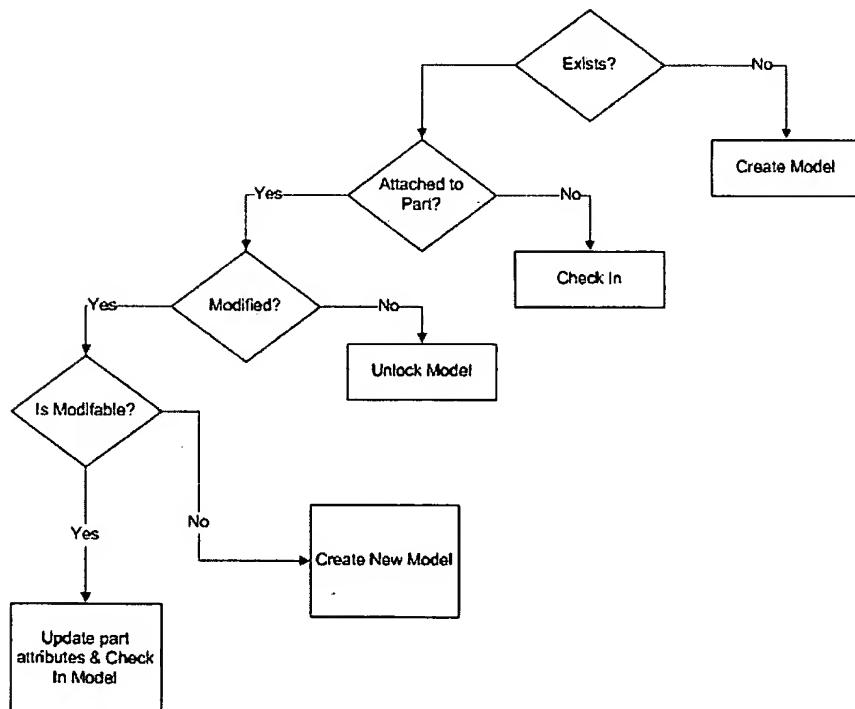


FIG. 51